

What is claimed is:

1. An archery bow, comprising:

a. a riser portion with an upper end and a lower end;

b. a pair of bow limb members wherein each bow limb member is formed from
5 fibers and resin, and has a longitudinal length, a butt section, a hinge section and a tip
section;

c. wherein the butt section of one bow limb member is attached to said upper
and lower ends of said riser respectively;

d. upper and lower rotational members mounted respectively to said tip sections
10 of said upper and lower bow limb members;

e. a bowstring extending between said upper and lower rotational members; and,

f. a substantially longitudinal protruding rib portion defined in a face of the
hinge section of each bow limb member.

2. The archery bow of claim 1, wherein each bow limb member is formed with a
15 substantially constant glass fiber to resin ratio in said butt section, said hinge section with said
rib portion and said tip section.

3. The archery bow of claim 1, wherein each said rib portion has a substantially
elliptical profile.

4. The archery bow of claim 1, wherein each said rib portion has a substantially
20 rectangular profile.

5. An archery bow limb, comprising, a longitudinal bow limb member for an archery
bow having a length, a butt section, a hinge section and a tip section; and a protruding rib
portion.

6. The bow limb of claim 5, wherein said rib portion is defined in said hinge section.
7. The bow limb of claim 6, wherein said rib portion is substantially longitudinal.
8. The bow limb of claim 7, wherein said rib portion is integrally formed with said limb.
9. The bow limb of claim 8, wherein said rib portion has a substantially elliptical profile.
- 5 10. The bow limb of claim 8, wherein said rib portion has a substantially rectangular profile.
11. The bow limb of claim 7, wherein said rib portion protrudes from the front face of said limb.
12. The bow limb of claim 11, wherein said rib portion has tapered edges from the rib
10 portion into said limb.
13. The bow limb of claim 12, wherein said rib portion is convex outward from said limb.
14. The bow limb of claim 13, wherein said rib portion has a middle apex area.
15. The bow limb of claim 11, wherein said limb defines front corner edges radiused along their length.
- 15 16. An archery bow limb, comprising, a bow limb member for an archery bow, having a longitudinal length, a butt section, a hinge section and a tip section; a protruding rib portion defined in said hinge section; and wherein said bow limb member is formed with a substantially constant cross-sectional area in said butt section, said hinge section and said tip section.
17. The archery bow limb of claim 16, wherein said tip section is formed with a partial
20 height area defining an area to be ground to form tip portions for supporting the axle of a rotational member.
18. The archery bow limb of claim 16, wherein said bow limb is formed from glass fibers and resin.

19. The bow limb of claim 18, wherein said rib portion is substantially longitudinal.

20. The bow limb of claim 19, wherein said rib portion has tapered edges from the rib portion into said limb.

21. The bow limb of claim 20, wherein said rib portion has a substantially elliptical profile.

22. The bow limb of claim 20, wherein said rib portion has a substantially rectangular profile.

23. The bow limb of claim 19, wherein said rib portion increases the sectional modulus of said hinge portion of said limb.

24. A mold for forming an archery bow limb, comprising:

- a. a mold assembly defining a mold cavity for receiving a resin and fiber slug;
- b. wherein said mold defines said cavity in the shape of an archery bow limb;
- c. a rib cavity formed in said mold cavity to define a protruding rib portion in an archery bow limb formed in said mold assembly.

25. The mold of claim 24, wherein said rib cavity is longitudinally aligned with the length of said mold cavity.

26. The mold of claim 25, wherein said rib cavity is formed in the mold cavity portion corresponding to the hinge portion of an archery bow limb formed in said mold assembly.

27. The mold of claim 25, wherein said rib cavity defines a substantially elliptical profile.

28. The mold of claim 25, wherein said rib cavity defines a substantially rectangular profile.

29. The mold of claim 25, wherein said rib cavity is concave to form a convex rib portion in the archery bow limb.

30. The mold of claim 25, wherein said mold cavity defines radiused corner profiles to form radiused corner edges along the length of the archery bow limb.

31. The mold of claim 24, wherein said mold assembly comprises a mating portion for pressing a resin and fiber slug into said mold cavity to form an archery bow limb.

5 32. The mold of claim 31, wherein said mold cavity includes a partial height area to form a reduced height tip portion in the archery bow limb which can be ground to form a slot.

33. A method of manufacturing an archery limb for an archery bow, comprising the steps of:

- a. forming a glass fiber slug suitable to be molded;
- 10 b. placing the glass fiber slug in a mold assembly defining an archery bow limb profile;
- c. compressing the glass fiber slug into the mold assembly to form the shape of an archery bow limb with a protruding rib portion formed in the face of the archery bow limb; and,
- 15 d. curing the glass fiber slug.

34. The method of claim 33, wherein the mold assembly forms the archery bow limb to maintain a substantially constant glass to fiber ratio along the bow limb length.

35. The method of claim 34, wherein the mold assembly is sized to form an archery bow limb with a substantially constant cross-sectional area.

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